

Notice of Allowability

Application No.

10/089,948

Examiner

Kuo-Liang Peng

Applicant(s)

MATSUOKA ET AL.

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/14/07 Amendment.
2. ☒ The allowed claim(s) is/are 17 and 20-31.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

1. Applicants' amendment filed June 14, 2007 is acknowledged. Claims 1-16, 18-19 and 32-42 are deleted. Claims 17 and 20 are amended. Now, Claims 17 and 20-31 are pending.
2. Claim rejection(s) under 35 USC 112 in the previous Office Action (Paper No. 120906) is/are removed.

Allowable Subject Matter

3. Claims 17 and 20-31 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The present claims are allowable for at least the following reason(s) over the closest references: Akhtar (Polymer Engineering and Science, 32(10) 690-698 (1992)), Selby (US 4 528 335), Takagi (JP 05-185425), Ono (JP 02-22245) and Deguchi (JP 03-215556)

Akhtar discloses a thermoplastic resin structure (i.e., dumbbell-shaped specimen)(page 692, left column) derived from a resin composition comprising a PPS and polyamides with various relative amounts of the two components (page

694 and Table 2). Akhtar does not teach or fairly suggest a thermoplastic resin structure derived from a polyamide/polyphenylene sulfide having the claimed **melt viscosity ratio** set forth in Claims 17 and 20. It is noted that Applicants' melt viscosity is determined by a method described in the specification (page 42). The PPS used has a melt viscosity (measured as shear viscosity using a capillary rheometer at a **shear rate of 10 s^{-1}**) **higher** than those of all the polyamides used. (Page 691, right column and Figure 2)

Selby discloses a composition comprising a polyphenylene sulfide and a polyamide. (col. 1, lines 34-42, Table 1 and Examples) The relative amounts of the polyphenylene sulfide and the polyamide are exemplified in Examples where the weight ratio of the PPS to PACP 9/6 (polyamide) ranges from 99:1 to 50:50. (Table 1) Thus, the volume ratio of the PPS to PACP 9/6 is about 99:1 to about 43:57 considering the specific gravities of a PPS and a polyamide are 1.4 and 1.0, respectively. As such, Selby does not teach or fairly suggest a thermoplastic resin structure derived from a polyamide/polyphenylene sulfide having the claimed **volume ratio** set forth in Claims 17 and 20. Furthermore, Selby fails to disclose the claimed melt viscosity ratio or at least recognize the importance of the melt viscosity ratio. As such, there is no particular motivation to pick and choose the **claimed melt viscosity ratio** set forth in Claims 17 and 20.

Takagi discloses a thermoplastic resin structure formed of a resin composition comprising polyphenylene sulfide (PPS) and polyamide with various relative amounts of the two components. Different morphologies can be obtained by blending the two components in the atmosphere or under reduced pressure. (col. 2, lines 3-22, col. 4, lines 11-13 and Examples). However, Applicants' argument set forth in Remarks, pages 5-6 is persuasive. In addition, it is noted that the weight ratios of the PPS to PA (polyamide) in Examples can be 5:95, 25:75 and 50:50. Thus, the volume ratios of the PPS to PA are 4:96, 19:81 and 43:57, respectively, considering the specific gravities of a PPS and a polyamide are 1.4 and 1.0, respectively. As such, Takagi does not teach or fairly suggest a thermoplastic resin structure derived from a polyamide/polyphenylene sulfide having the claimed **volume ratio** set forth in Claims 17 and 20. Furthermore, Takagi fails to disclose the claimed melt viscosity ratio or at least recognize the importance of the melt viscosity ratio. As such, there is no particular motivation to pick and choose the **claimed melt viscosity ratio** set forth in Claims 17 and 20.

Ono discloses a molding thermoplastic resin structure formed of a resin composition comprising a resinous material (PPA), a polyphenylene sulfide (PPS) and a thermoplastic resin such as polyamide with various relative amounts of the two components. However, Applicants' argument set forth in Remarks, pages 6-7

is persuasive. In addition, Examiner agrees with Applicants' argument that Ono does not disclose the claimed melt viscosity ratio because it is noted that the "polyamide (PAS)" in page 9 of the previous Office action (Paper No. 120906) is not a polyamide because PAS is a polyarylene sulfide as indicated in the translation (page 3, 3rd paragraph). This renders the melt viscosity ratio disclosed by Ono as recited in the previous Office action moot. As such, Ono fails to disclose the claimed melt viscosity ratio or at least recognize the importance of the melt viscosity ratio. As such, there is no particular motivation to pick and choose the **claimed melt viscosity ratio** set forth in Claims 17 and 20.

Deguchi discloses a molding thermoplastic resin structure formed of a resin composition comprising a polyamide, a polyarylene sulfide and a layered silicate with various relative amounts of the two components. (page 2, lower left column, page 3, upper left column and lower right column, page 5, upper left column and Examples). The melt flow rate of the polyarylene sulfide is described in page 3, lower left column. It is noted that the melt flow rate does not equate the melt viscosity. The molecular weight of the polyamide is described in page 3, upper right column. However, Deguchi fails to disclose the claimed melt viscosity ratio or at least recognize the importance of the melt viscosity ratio. As such, there is no

particular motivation to pick and choose the **claimed melt viscosity ratio** set forth in Claims 17 and 20.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR

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only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp

August 17, 2007



Kuo-Liang Peng
Primary Examiner
Art Unit 1712